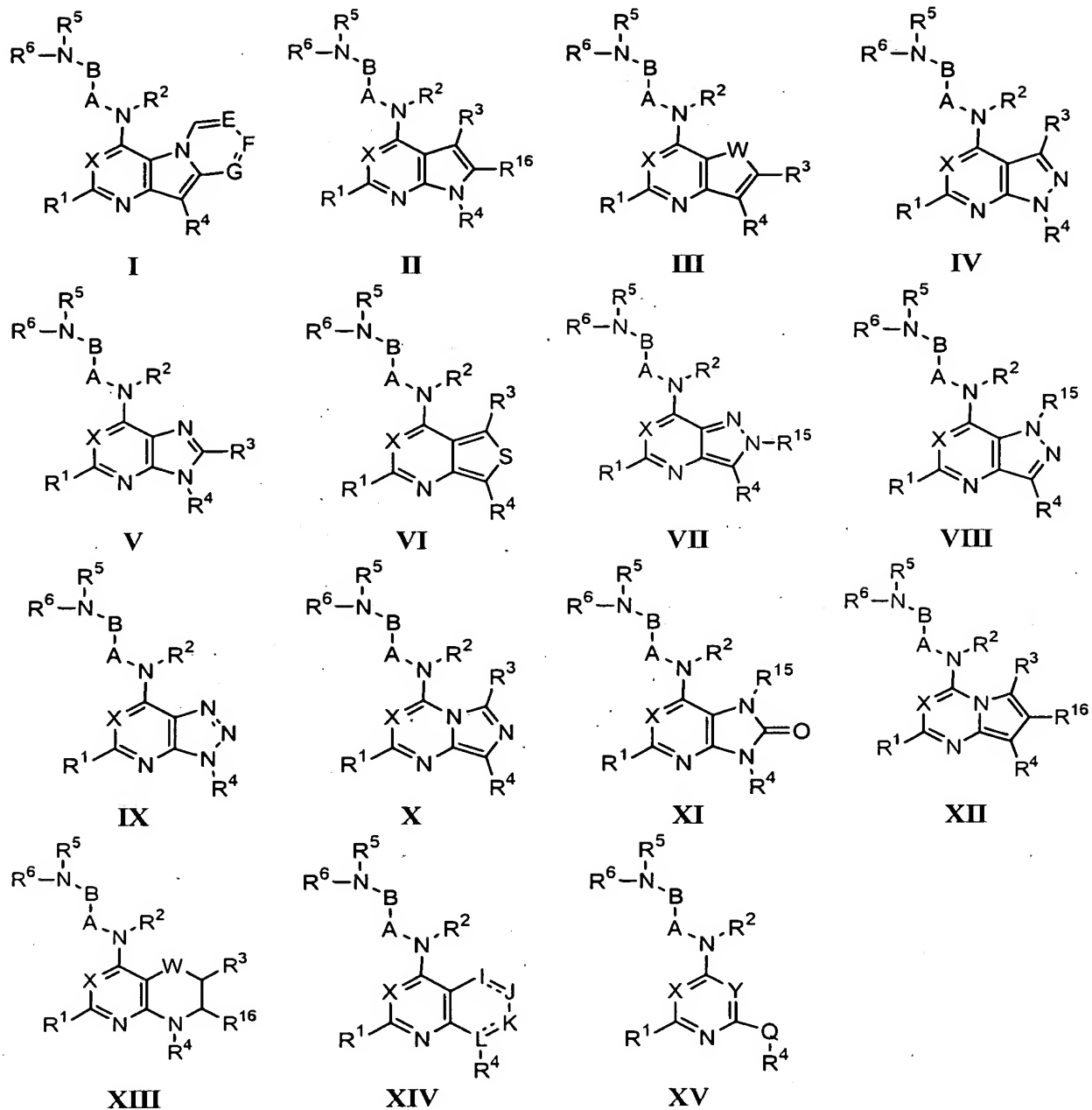


IN THE CLAIMS

1. (Original) A compound selected from Formula I-XV,



or a pharmaceutically acceptable salt thereof, wherein

X is N or CR¹⁴;

W is S, O, or NR¹⁵;

Y is N or CR³;

E, F, and G are each, independently, CR³ or N;

I and J are each, independently,

C=O, S, O, CR³R¹⁶ or NR¹⁵ when single bonded to both adjacent ring atoms, or
N, or CR³ when double bonded to an adjacent ring atom;

K is

N or CR³ when double bonded to L or J, or
O, S, C=O, CR³R¹⁶, or NR¹⁵ when single bonded to both adjacent ring atoms, or
N or CR³ when double bonded to an adjacent ring atom;

L is

N or CR¹⁶ when single bonded to all atoms to which it is attached, or
C (carbon) when double bonded to K;

the 6- or 7-membered ring that contains I, J, K, and L may contain from 1 to 3 double bonds,
from 0 to 2 heteroatoms, and from 0 to 2 C=O groups, wherein the carbon atom of
such groups are part of the ring and the oxygen atom is a substituent on the ring;

Q is O or NR¹⁵;

R¹ is selected from H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₂-C₆
alkenyl, C₂-C₆ alkynyl, cyano, halo, C₁-C₆ haloalkyl, OR⁷, C₁-C₆ alkyl-OR⁷; C₁-C₆
cyanoalkyl, NR⁸R⁹, C₁-C₆ alkyl-NR⁸R⁹;

R^2 is H,

C_1 - C_6 alkyl which optionally forms a C_3 - C_6 aminocarbocycle or a C_2 - C_5 aminoheterocycle with A or B, each optionally substituted at each occurrence with R^7 ,
 C_3 - C_{10} cycloalkyl, or
(C_3 - C_{10} cycloalkyl) C_1 - C_6 alkyl;
or R^2 and R^6 jointly form with the 2 nitrogen atoms to which they are bound a C_2 - C_5 aminoheterocycle optionally substituted at each position with R^7 ;

A is $(CH_2)_m$ where m is 1,2 or 3 and is optionally mono- or di-substituted on each occurrence with C_1 - C_6 alkyl, C_3 - C_{10} cycloalkyl, (C_3 - C_{10} cycloalkyl) C_1 - C_6 alkyl, C_1 - C_6 alkenyl, C_1 - C_6 alkynyl, cyano, halo, C_1 - C_6 haloalkyl, OR^7 , C_1 - C_6 alkyl- OR^7 ; C_1 - C_6 cyanoalkyl, NR^8R^9 , C_1 - C_6 alkyl- NR^8R^9 , or

A and B jointly form a C_3 - C_6 carbocycle, optionally substituted at each position with R^7
or,

A and R^2 jointly form a C_3 - C_6 aminocarbocycle or a C_2 - C_5 aminoheterocycle optionally substituted at each position with R^7 ;

B is $(CH_2)_n$ where n is 1,2 or 3 and is optionally mono- or di-substituted on each carbon atom with C_1 - C_6 alkyl, C_3 - C_{10} cycloalkyl, (C_3 - C_{10} cycloalkyl) C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_2 - C_6 alkynyl, cyano, halo, C_1 - C_6 haloalkyl, OR^7 , C_1 - C_6 alkyl- OR^7 ; C_1 - C_6 cyanoalkyl, NR^8R^9 , C_1 - C_6 alkyl- NR^8R^9 , or

B and R^2 jointly form a C_3 - C_6 aminocarbocycle or a C_2 - C_5 aminoheterocycle optionally substituted at each position with R^7 ;

R³ and R¹⁶ are independently selected at each occurrence from H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, cyano, halogen, C₁-C₆ haloalkyl, OR⁷, C₁-C₆ alkyl-OR⁷, C₁-C₆ cyanoalkyl, NR⁸R⁹, C₁-C₆ alkyl-NR⁸R⁹;

R⁴ is selected from aryl or heteroaryl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₆ alkenyl, halogen, C₁-C₆ haloalkyl, trifluoromethylsulfonyl, OR⁷, C₁-C₆ alkyl-OR⁷, NR⁸R⁹, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, C₁-C₆ alkyl-CONR⁸R⁹, COOR⁷, C₁-C₆ alkyl-COOR⁷, CN, C₁-C₆ alkyl-CN, SO₂NR⁸R⁹, SO₂R⁷, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), with the proviso that at least one of the positions ortho or para to the point of attachment of the aryl or heteroaryl ring to the heterocyclic core is substituted;

R⁵ is selected from:

C₁-C₆ alkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, each of which is substituted with 1 to 5 groups independently selected at each occurrence from halo, C₁-C₂ haloalkyl, OR⁷, cyano, NR⁸R⁹, CONR⁸R⁹, COOR⁷, SO₂NR⁸R⁹, SO₂R⁷, NR¹¹COR¹², NR¹¹SO₂R⁷;

C₁-C₆ arylalkyl, C₁-C₆ heteroarylalkyl, C₅-C₈ arylcycloalkyl, or C₅-C₈ heteroarylalkyl, where aryl is phenyl or naphthyl, and heteroaryl is 2-,3-, or 4-pyridyl, 2-, 4- or 5-pyrimidinyl, triazinyl, 1-, 2- or 4-imidazolyl, 2-, 4-, or 5-oxazolyl, isoxazolyl, indolyl, pyrazolyl, quinolyl, isoquinolyl, 2-, 4-, or 5-thiazolyl, benzothiadiazolyl, 1-, 3- or 4-pyrazolyl, 1-, 3- or 4-triazolyl, 2-triazinyl, 2-pyrazinyl, 2-, or 3-furanyl, 2-, or 3-thienyl, 2-, or 3-benzothienyl, or 1-, 2- or 5-tetrazolyl, each of which is optionally

substituted with 1 to 5 substituents independently selected at each occurrence from C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₆ alkenyl, halogen, C₁-C₆ haloalkyl, trifluoromethylsulfonyl, OR⁷, NR⁸R⁹, C₁-C₆ alkyl-OR⁷, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR⁷, CN, SO₂NR⁸R⁹, SO₂R⁷, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), with the proviso that 2 adjacent substituents can optionally form together a C₃-C₁₀ cycloalkyl ring, a C₃-C₁₀ cycloalkenyl ring or a heterocycloalkyl ring;

C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₃-C₁₀ cycloalkenyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, each of which is optionally with 1 to 6 substituents independently selected at each occurrence from C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₆ alkenyl, halogen, C₁-C₆ haloalkyl, OR⁷, NR⁸R⁹, with the proviso that when two OR⁷ or NR⁸R⁹ substituents are geminally located on the same carbon R⁷ is not H and they can form together a C₂-C₄ ketal, oxazoline, oxazolidine, imidazoline, or imidazolidine heterocycle, C₁-C₆ alkyl-OR⁷, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR⁷, CN, oxo, hydroximino, C₁-C₆ alkoximino, SO₂NR⁸R⁹, SO₂R⁷, heterocycloalkyl, aryl, heteroaryl, where aryl or heteroaryl is optionally substituted with 1 to 5 substituents independently selected at each occurrence from C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₆ alkenyl, halogen, C₁-C₆ haloalkyl, trifluoromethylsulfonyl, OR⁷, NR⁸R⁹, C₁-C₆ alkyl-OR⁷, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR⁷, CN, SO₂NR⁸R⁹, SO₂R⁷, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), with the proviso that 2 adjacent substituents can optionally form together a C₃-C₁₀ cycloalkyl ring, a C₃-C₁₀ cycloalkenyl ring or a heterocycloalkyl ring;

aryl or heteroaryl, optionally substituted with 1 to 5 substituents independently selected at

each occurrence from halogen, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₆ alkenyl, halogen, C₁-C₆ haloalkyl, trifluoromethylsulfonyl, OR⁷, NR⁸R⁹, C₁-C₆ alkyl-OR⁷, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR⁷, CN, SO₂NR⁸R⁹, SO₂R⁷, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), with the proviso that 2 adjacent substituents can optionally form together a C₃-C₁₀ cycloalkyl ring, a C₃-C₁₀ cycloalkenyl ring or a heterocycloalkyl ring;

or

3- or 4-piperidinyl, 3-pyrrolidinyl, 3- or 4- tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydrothiopyranyl, 3- or 4-(1,1-dioxo) tetrahydrothiopyranyl, 1-azabicyclo[4.4.0]decyl, 8-azabicyclo[3.2.1]octanyl, norbornyl, quinuclidinyl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from R⁷, C₁-C₆ alkyl-OR⁷, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR⁷;

R⁶ is selected from H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₂-C₄ alkenyl, C₁-C₆ arylalkyl, C₁-C₆ heteroarylalkyl where aryl or heteroaryl are optionally substituted with 1 to 5 substituents independently selected at each occurrence from halogen, C₁-C₆ haloalkyl, OR¹³, NR⁸R⁹, C₁-C₆ alkyl-OR¹³, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR⁷, CN, SO₂NR⁸R⁹, SO₂R⁷, or R⁶ and R², as mentioned above, jointly form, with the 2 nitrogen atoms to which they are bound, a C₂-C₅ aminoheterocycle optionally substituted at each position with R⁷;

R⁷ is H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₃ haloalkyl, or heterocycloalkyl, C₁-C₈ alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C₁-C₈ alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C₁-C₆ arylalkyl or C₁-C₆ heteroarylalkyl each optionally substituted with 1 to 5 substituents independently selected at each occurrence from halogen, C₁-C₆ haloalkyl, OR¹³, NR⁸R⁹, C₁-C₆ alkyl-OR¹³, C₁-C₆ alkyl-NR⁸R⁹, CONR⁸R⁹, COOR¹³, CN, SO₂NR⁸R⁹, SO₂R¹³, with the proviso that when R⁷ is SO₂R¹³, R¹³ cannot be H;

R⁸ and R⁹ are independently selected at each occurrence from H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₂-C₆ alkenyl, C₃-C₁₀ cycloalkenyl, C₂-C₆ alkynyl, heterocycloalkyl, C₁-C₈ alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C₁-C₆ arylalkyl or C₁-C₆ heteroarylalkyl, or R⁸ and R⁹, taken together, can form a C₃-C₆ aminocarbocycle or a C₂-C₅ aminoheterocycle each optionally substituted at each occurrence with C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, C₃-C₁₀ cycloalkenyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₁-C₃ haloalkyl, heterocycloalkyl, C₁-C₈ alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C₁-C₈ alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C₁-C₆ arylalkyl or C₁-C₆ heteroarylalkyl;

R¹¹ is selected from H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl;

R¹² is selected from H, aryl, heteroaryl, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, optionally substituted with OR⁷, NR⁸R⁹], C₃-C₆ aminocarbocycle, or C₂-C₅ aminoheterocycle;

R¹³ is independently selected at each occurrence from H, C₁-C₆ alkyl, C₃-C₁₀ cycloalkyl, (C₃-C₁₀ cycloalkyl) C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₁-C₆ haloalkyl, with the

proviso that for $\text{SO}_2\text{NR}^8\text{R}^9$, SO_2R^{13} , R^{13} cannot be H;

R^{14} is H, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_3\text{-C}_{10}$ cycloalkyl, ($\text{C}_3\text{-C}_{10}$ cycloalkyl) $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_2\text{-C}_4$ alkenyl, $\text{C}_2\text{-C}_4$ alkynyl, halo, or CN; and

R^{15} is selected at each occurrence from H, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_3\text{-C}_{10}$ cycloalkyl, ($\text{C}_3\text{-C}_{10}$ cycloalkyl) $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_2\text{-C}_6$ alkenyl, $\text{C}_2\text{-C}_6$ alkynyl, $\text{C}_2\text{-C}_6$ alkyl- OR^7 , $\text{C}_2\text{-C}_6$ cyanoalkyl, $\text{C}_2\text{-C}_6$ alkyl- NR^8R^9 .

Cancel Claims 2-75.

76. (original) A compound of claim 1 of formula XV and isomers thereof, stereoisomeric forms thereof, or mixture of stereoisomeric forms thereof, and pharmaceutically acceptable salt or prodrug forms thereof, selected from the group consisting of:

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R^1 is Me, R^3 is Me, R^4 is 2,4,6-trimethylphenyl, R^2 is H, A is methylene, B is methylene, R^5 is hydrogen, R^6 is cyclopentyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R^1 is Me, R^3 is Me, R^4 is 2,4,6-trimethylphenyl, R^2 is H, A is methylene, B is methylene, R^5 is hydrogen, R^6 is cyclohexyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R^1 is Me, R^3 is Me, R^4 is 2,4,6-trimethylphenyl, R^2 is H, A is methylene, B is methylene, R^5 is hydrogen, R^6 is tetrahydropyranyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 3,4-dimethoxyphenethyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 1-pyrimidin-2-yl-piperidin-4-yl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is cyclopentyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is cyclohexyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is tetrahydropyranyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 3,4-dimethoxyphenethyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,4,6-trimethylphenyl, R² is H, A is methylene, B is methylene, R⁵ is

hydrogen, R⁶ is 1-pyrimidin-2-yl-piperidin-4-yl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is cyclopentyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is cyclohexyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is tetrahydropyranyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 3,4-dimethoxyphenethyl;

a compound of formula XV wherein X is CH, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 1-pyrimidin-2-yl-piperidin-4-yl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is cyclopentyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is cyclohexyl;

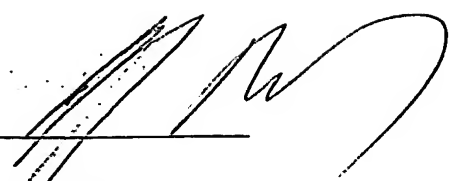
a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is tetrahydropyranyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 3,4-dimethoxyphenethyl;

a compound of formula XV wherein X is N, Y is carbon, Q is oxygen, R¹ is Me, R³ is Me, R⁴ is 2,6-dichloro-4-methoxyphenyl, R² is H, A is methylene, B is methylene, R⁵ is hydrogen, R⁶ is 1-pyrimidin-2-yl-piperidin-4-yl.

Cancel Claims 77 - 91.

Respectfully submitted,



JOHN RICHARDS
LADAS & PARRY
26 WEST 61ST STREET
NEW YORK, NEW YORK 10023
REG.NO.31053(212)708-1915